AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of forming a copper interconnect, the method comprising:

forming a first sacrificial dielectric layer above a structure layer and adjacent a contact;

forming a second sacrificial dielectric layer above the first sacrificial dielectric layer and the contact;

forming an opening in the second sacrificial dielectric layer, wherein at least a portion of the opening is above at least a portion of the contact;

forming a copper layer above the second sacrificial dielectric layer and in the opening;

forming the copper interconnect by removing portions of the copper layer above the second sacrificial dielectric layer, leaving the copper interconnect in the opening;

removing the first and second sacrificial dielectric layers; and

forming a low dielectric constant dielectric layer above the structure layer and adjacent the copper interconnect and the contact.

2. (Original) The method of claim 1, further comprising:

planarizing the low dielectric constant dielectric layer.

3. (Original) The method of claim 1, wherein forming the low dielectric constant dielectric layer includes forming the low dielectric constant dielectric layer out of a low

dielectric constant (low K) dielectric material, having a dielectric constant K of at most about four.

4. (Original) The method of claim 1, further comprising:

forming and patterning a mask layer above the low dielectric constant dielectric layer to have a mask layer opening above at least a portion of the copper interconnect.

5. (Previously Presented) The method of claim 1, wherein forming the low dielectric constant dielectric layer includes forming the low dielectric constant dielectric layer using one of chemical vapor deposition (CVD), low-pressure CVD (LPCVD), plasma-enhanced CVD (PECVD), sputtering, physical vapor deposition (PVD), and spin-on glass.

6. (Previously Presented) The method of claim 1, wherein forming the second sacrificial dielectric layer includes forming the second sacrificial dielectric layer out of one of an oxide, an oxynitride, silicon dioxide, a nitrogen-bearing oxide, a nitrogen-doped oxide, silicon oxynitride, a high dielectric constant (high K) material, wherein K is at least about 8, titanium oxide, tantalum oxide, barium strontium titanate, and forming the second sacrificial dielectric layer using one of chemical vapor deposition (CVD), low-pressure CVD (LPCVD), plasma-enhanced CVD (PECVD), sputtering, physical vapor deposition (PVD), and thermal growing.

7. (Previously Presented) The method of claim 1, wherein forming the opening in the second sacrificial dielectric layer includes forming the opening in the second sacrificial dielectric layer using at least one of a mask of photoresist and an etch stop layer, the at least one of the mask of photoresist and the etch stop layer being formed and patterned above the second sacrificial dielectric layer.

8. (Original) The method of claim 7, wherein using the one of the mask of photoresist and the etch stop layer includes using an etch stop layer formed of silicon nitride.

9. (Original) The method of claim 1, wherein forming the copper layer includes forming the copper layer using electrochemical deposition of copper.

10. (Previously Presented) The method of claim 9, wherein using the electrochemical deposition of the copper includes forming at least one barrier layer and a copper seed layer in the opening before the electrochemical deposition of the copper, and planarizing the copper using chemical mechanical polishing after the electrochemical deposition of the copper.

11. (Previously Presented) A method of forming a copper interconnect, the method comprising:

forming a first sacrificial dielectric layer above a structure layer and adjacent a contact;

forming a second sacrificial dielectric layer above the first sacrificial dielectric layer and the contact;

forming an opening in the second sacrificial dielectric layer, wherein at least a portion of the opening is above at least a portion of the contact;

forming at least one barrier metal layer and a copper seed layer above the second sacrificial dielectric layer and in the opening;

electrochemically depositing copper above the copper seed layer above the at least one barrier metal layer;

forming the copper interconnect by removing the copper and the at least one barrier metal layer and the copper seed layer above the second sacrificial dielectric layer, leaving the copper interconnect in the opening;

removing the first and second sacrificial dielectric layers; and

forming a low dielectric constant dielectric layer above the structure layer and adjacent the copper interconnect and the contact.

12. (Original) The method of claim 11, further comprising:

planarizing the low dielectric constant dielectric layer.

13. (Original) The method of claim 11, wherein forming the low dielectric constant dielectric layer includes forming the low dielectric constant dielectric layer out of a low dielectric constant (low K) dielectric material, having a dielectric constant K of at most about four.

14. (Original) The method of claim 11, further comprising:

forming and patterning a mask layer above the low dielectric constant dielectric layer to have a mask layer opening above at least a portion of the copper interconnect.

15. (Previously Presented) The method of claim 11, wherein forming the low dielectric constant dielectric layer includes forming the low dielectric constant dielectric layer using one of chemical vapor deposition (CVD), low-pressure CVD (LPCVD), plasma-enhanced CVD (PECVD), sputtering, physical vapor deposition (PVD), and spin-on glass.

16. (Previously Presented) The method of claim 11, wherein forming the second sacrificial dielectric layer includes forming the second sacrificial dielectric layer out of one of an oxide, an oxynitride, silicon dioxide, a nitrogen-bearing oxide, a nitrogen-doped oxide, silicon oxynitride, a high dielectric constant (high K) material, wherein K is at least about 8, titanium oxide, tantalum oxide, barium strontium titanate, and forming the second sacrificial dielectric layer using one of chemical vapor deposition (CVD), low-pressure CVD (LPCVD), plasma-enhanced CVD (PECVD), sputtering, physical vapor deposition (PVD), and thermal growing.

17. (Previously Presented) The method of claim 11, wherein forming the opening in the second sacrificial dielectric layer includes forming the opening in the second sacrificial dielectric layer using at least one of a mask of photoresist and an etch stop layer, the at least one of the mask of photoresist and the etch stop layer being formed and patterned above the second sacrificial dielectric layer.

18. (Original) The method of claim 17, wherein using the one of the mask of photoresist and the etch stop layer includes using an etch stop layer formed of silicon nitride.

19. (Original) The method of claim 11, wherein removing the copper and the at least one barrier metal layer and the copper seed layer includes planarizing the copper.

20. (Original) The method of claim 19, wherein planarizing the copper includes using chemical mechanical polishing.

21-40. (Canceled)

41. (Previously Presented) The method of claim 1, wherein forming the first sacrificial dielectric layer adjacent the contact comprises forming the first sacrificial layer adjacent an intermetal via connect.

42. (Previously Presented) The method of claim 11, wherein forming the first sacrificial dielectric layer adjacent the contact comprises forming the first sacrificial layer adjacent an intermetal via connect.